

REMARKS

Claims 1, 3-13, and 38 are pending. Claims 2 and 14-37 are currently canceled. No claims have been withdrawn from consideration. No claims are currently amended. No claims have been added. Reconsideration of the application is requested.

Upon review of the file, it was noted that the initialed Form PTO-1449 filed with the Information Disclosure Statement dated February 7, 2007 has not been received. It is requested that the Examiner initial the Form PTO-1449 and return it to the undersigned attorney. Copies of the Form PTO-1449 and its electronic filing system receipt are enclosed for the Examiner's convenience.

§ 103 Rejections

Claims 1, 3-13, and 38 stand rejected under 35 USC § 103(a) as being unpatentable over Chau et al. (US 5,735,988) in view of the collective teachings of Stamm (US 3,712,706) and Steuben et al. (US 4,165,266). The Examiner submits in part that: Chau et al. disclose a method of making a reflective article that includes providing a base layer, forming a structured surface on the base layer, applying a reflective coating to the structured surface, applying an at least partially transparent, flowable, and radiation curable adhesive to the structured surface, and placing a substrate over the radiation curable adhesive; Chau et al. are silent as to the structured surface comprising retroreflective surface topography; Stamm et al. disclose a surface topography to produce retroreflective articles having high retroreflective efficiency by providing a base layer, forming a structured surface having cube corner cavities, applying a reflective foil to the structured surface, and filling the structured surface with an optically transparent material; It would have been obvious to use the cube corner cavity surface as disclosed in Stamm et al. for the topography of Chau et al. in order to create a cube corner cavity retroreflective article; Chau et al. discloses UV curable adhesives; Stueben discloses that pressure sensitive UV cured adhesives are known and form superior adhesives for particular applications; and that it would have been obvious to use a UV curable pressure sensitive adhesive as is known in the art, to attach the retroreflective article to the surface it will be attached to.

Applicants' invention is directed to a retroreflective article that includes a body having cube corner cavities with a reflective film disposed on at least the recessed faces of the cube corner cavities. The reflective cavities are filled with a pressure sensitive adhesive that is transparent and radiation or UV curable. The claimed articles are capable of being adhered directly to a transparent substrate to retroreflect light incident from the opposite side of the transparent substrate. Alternatively, the claimed articles are capable of having a temporary protective cover liner. This configuration allows the manufacturer the ability to remove the temporary protective liner and then attach a permanent cover layer, which can be selected from a multitude of different types of cover layers as may be required by a customer. Thus, the claimed articles allow for flexibility in manufacturing and inventory control of such articles, which leads to lower costs.

Chau et al disclose methods of making an article for use in an LCD system including a base layer having a topography that can be reflective, a UV curable, partially transmissive fluid on the topography, and a substrate on top of fluid and attached to the base layer. Chau et al. do not disclose transparent UV curable pressure sensitive adhesives. Chau et al. was concerned with improving the specific manufacturing process for replicating a surface topography.

Stamm discloses articles having a retroreflective surface having retroreflective cavities filled with an optically transparent medium. Stamm is silent as to the type of optically transparent medium used and does not disclose any UV curable adhesives. Stamm was concerned with forming a high efficiency retroreflective article through improving the dimensions of cube corner cavities.

Steuben et al. disclose particular radiation curable pressure sensitive adhesive compositions used for making pressure sensitive adhesive tapes. Steuben et al. were concerned with providing a pressure sensitive adhesive having improved peel and shear strength. Steuben et al. do not disclose or suggest transparent pressure sensitive adhesives.

Applicants respectfully disagree with the above rejection because Applicants submit that the requisite motivation to combine the references as suggest by Examiner is missing, and that even if combined as suggested, the cited references do not disclose the claimed invention.

Steuben et al. disclose UV curable pressure sensitive adhesives that are useful for making tapes. Steuben et al. are silent with regard to transparent adhesives and uses for the disclosed UV curable pressure sensitive adhesives for anything other than tapes, that is, as a filling substance for retroreflective cube corner articles. Chau et al. do not disclose or provide any desirability of using a pressure sensitive adhesive in place of its UV curable composition since Chau et al. was concerned with replicating a surface topography. Stamm et al. also do not provide any suggestion, motivation, or desirability for using a UV pressure sensitive adhesive in conjunction with a retroreflective article. Thus, without the present specification to use as a roadmap to reach a desirable result, one of ordinary skill in the art, looking at the cited references, would not be motivated to combine them as suggested by the Examiner.

Additionally, even if the requisite motivation to combine the above references were to exist, such a combination would not result in the claimed invention, since nothing in Steuben et al. suggests that Chau et al.'s UV curable composition is pressure sensitive or that Steuben et al.'s UV curable pressure sensitive adhesive is transparent. Thus, any such combination would not result in Applicants claimed retroreflective article having a radiation or UV curable transparent adhesive in retroreflective cube corners.

Accordingly, for the above reasons, Applicants respectfully request that the above rejection of the claims be withdrawn.

Claims 1, 3-13, and 38 stand rejected under 35 USC § 103(a) as being unpatentable over Rowland (US 5,376,431) or Rowland (US 3,810,804) in view of Stamm and Steuben et al. The Examiner submits in part that: Both primary references disclose retroreflective article including cube corner prisms coated with a reflective layer that has adhesive thereover; The primary references differ from the recited invention that the prism are considered a positive array instead of negative array; Light that enters through the backside or opposite the adhesive in a positive array is reflected back there through; Applicants invention is cube corners as cavities in the front side then applying a reflective film and adhesive thereto so that the article can be mounted from the front side so that light can pass through the front side and be reflected; Stamm discloses that cube corner elements can be either cavity or prism form, then coated reflective material and filled in with a transparent medium; It would have obvious to one ordinarily skilled in the art at the

time the invention was made to either primary reference to form cube corner elements as a cavity, so light can pass through the adhesive side of the article and reflected; Regarding the pressure sensitive limitation in claim 1, Rowland '431 and Rowland '804 disclose pressure sensitive adhesives; Both Rowland references fail to disclose that the disclose adhesive is both pressure sensitive and UV curable; Steuben et al. disclose that pressure sensitive UV cured adhesives are known and form superior adhesives for particular applications; and that it would have been obvious to one ordinarily skilled in the art that the time the invention was made to use a UV curable pressure sensitive adhesive to attach the retroreflective article to the surface it will be attached to.

Stamm and Steuben et al. have been discussed above.

Nothing in either Rowland discloses that the UV curable pressure sensitive adhesive in Steuben et al. is transparent or that their pressure sensitive adhesive is radiation or UV curable. Thus, assuming requisite motivation to combine the references as suggested (without using Applicants' specification as a roadmap), the combination of references do not suggest or disclose the claimed invention.

Accordingly, for the reasons stated above, Applicants respectfully request that the above rejection be withdrawn.

In view of the above, it is submitted that the application is in condition for allowance. Examination and reconsideration of the application is requested.

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Date

Respectfully submitted,

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